**CLAIMS:**

1. (currently amended) A valve timing control device for an internal combustion engine comprising:

a driving rotational member driven by a crankshaft of the engine;

a driven rotational member including either one of a camshaft having a cam that opens an engine valve, provided at an associated one of an intake port and an exhaust port for opening and closing the associated port against a spring bias of a valve spring, which biases the engine valve in a direction for closing of the associated port, and a separate member integrally connected to and separable from the camshaft; and

an installation-angle adjusting device disposed between the driving rotational member and the driven rotational member to transmit a torque of the driving rotational member to the driven rotational member,

the installation-angle adjusting device comprising a movable operating member that varies, depending on engine operating conditions, a relative-rotation phase between the crankshaft and the camshaft by way of movement of the movable operating member in a substantially radial direction of the camshaft, said movement of the movable operating member being created by motion-converting a rotational movement produced by an electromagnetic force ~~depending on engine operating conditions~~.

2. (currently amended) A valve timing control device for an internal combustion engine as claimed in claim 1, wherein the installation-angle adjusting mechanism transmits the torque of the driving rotational member to the driven rotational member by converting **[[**a**]]** the rotational movement produced by the electromagnetic force ~~depending on the engine operating conditions~~ into a radial displacement of the movable operating member and by further converting the radial displacement of the movable operating member into ~~another~~ a rotational movement of the camshaft.

3. (currently amended) A valve timing control device for an internal combustion engine as claimed in claim 2, wherein the rotational movement produced ~~depending on the engine operating conditions~~ by the electromagnetic force is created by an electromagnetic brake.

4. (previously presented) A valve timing control device for an internal combustion engine as claimed in claim 3, wherein the installation-angle adjusting mechanism further comprises a restricting mechanism that restricts the radial displacement of the movable operating member in the substantially radial direction of the camshaft when a relative-rotation phase between the driving rotational member and the driven rotational member reaches a predetermined value.

5. (original) A valve timing control device for an internal combustion engine as claimed in claim 4, wherein the restricting mechanism comprises a stopper that an end portion of the movable operating member is brought into abutted-engagement with the stopper when the relative-rotation phase between the driving rotational member and the driven rotational member reaches a substantially maximum value.

6. (currently amended) A valve timing control device for an internal combustion engine as claimed in claim 4, wherein the restricting mechanism comprises a stopper that a connected end portion of [[the]] a link, disposed between the movable operating member and the driven rotational member, is brought into abutted-engagement with the stopper when the relative-rotation phase between the driving rotational member and the driven rotational member reaches a substantially maximum value.

7. (original) A valve timing control device for an internal combustion engine as claimed in claim 5, which further comprises a cushioning mechanism provided at the stopper or a member which is brought into abutted-engagement with the stopper.

8. (original) A valve timing control device for an internal combustion engine as claimed in claim 6, which further comprises a cushioning mechanism provided at the stopper or a member which is brought into abutted-engagement with the stopper.

9. (currently amended) A valve timing control device for an internal combustion engine comprising:

a driving rotational member driven by a crankshaft of the engine;

~~an engine valve provided at an associated one of an intake port and an exhaust port for opening and closing the associated port;~~

~~a valve spring biasing the engine valve in a direction closing of the associated port of the intake and exhaust ports;~~

a driven rotational member including either one of a camshaft having a cam that opens **[[**the**]]** an engine valve, provided at an associated one of an intake port and an exhaust port for opening and closing the associated port against a spring bias of **[[**the**]]** a valve spring, which biases the engine valve in a direction for closing of the associated port, and a separate member integrally connected to and separable from the camshaft; and

an installation-angle adjusting ~~mechanism~~ device disposed between the driving rotational member and the driven rotational member to transmit a torque of the driving rotational member to the driven rotational member, the installation-angle adjusting ~~mechanism~~ device comprising a movable operating member that varies, depending on engine operating conditions, a relative-rotation phase between the crankshaft and the camshaft by way of movement of the movable operating member guided in a substantially radial direction of the camshaft ~~depending on engine operating conditions; and~~,

the installation-angle adjusting ~~mechanism~~ device further comprising:

~~a radial guide provided at either one of the driving rotational member and the driven rotational member for guiding the movable operating member and extending in a radial direction of the one rotational member;~~

a guide plate provided to be rotatable relative to the driving rotational member and the driven rotational member, and having a **[[**spiral**]]** guide that guides the movable operating member and is formed **[[**spirally**]]** from an outer periphery of the guide plate to an axis of the guide plate, and producing relative rotation of the **[[**spiral**]]** guide ~~to the radial guide~~ by an electromagnetic force depending on the engine operating conditions; and

a link provided between the movable operating member and the driven rotational member and transmitting a motion to the driven rotational member while converting a radial displacement of the movable operating member in the substantially radial direction of the camshaft into a rotational movement of the camshaft.

10. (currently amended) A valve timing control device for an internal combustion engine as claimed in claim 9, which further comprises an electromagnetic brake that moves the movable operating member in the substantially radial direction of the camshaft by braking

the [[spiral]] guide rotating and thus ~~rotating the spiral guide relative to the radial guide~~ producing the relative rotation of the guide.

11. (previously presented) A valve timing control device for an internal combustion engine as claimed in claim 10, wherein the installation-angle adjusting mechanism further comprises a restricting mechanism that restricts the radial displacement of the movable operating member in the substantially radial direction of the camshaft when a relative-rotation phase between the driving rotational member and the driven rotational member reaches a predetermined value.

12. (original) A valve timing control device for an internal combustion engine as claimed in claim 11, wherein the restricting mechanism comprises a stopper that an end portion of the movable operating member is brought into abutted-engagement with the stopper when the relative-rotation phase between the driving rotational member and the driven rotational member reaches a substantially maximum value.

13. (original) A valve timing control device for an internal combustion engine as claimed in claim 11, wherein the restricting mechanism comprises a stopper that a connected end portion of the link is brought into abutted-engagement with the stopper when the relative-rotation phase between the driving rotational member and the driven rotational member reaches a substantially maximum value.

14. (original) A valve timing control device for an internal combustion engine as claimed in claim 12, which further comprises a cushioning mechanism provided at the stopper or a member which is brought into abutted-engagement with the stopper.

15. (original) A valve timing control device for an internal combustion engine as claimed in claim 13, which further comprises a cushioning mechanism provided at the stopper or a member which is brought into abutted-engagement with the stopper.

16. (original) A valve timing control device for an internal combustion engine as claimed in claim 10, wherein the electromagnetic brake comprises a first electromagnetic brake and a second electromagnetic brake that accelerates and decelerates rotary motion of

the guide plate by controlling energizing and de-energizing of each of the first and second electromagnetic brakes.

17. (original) A valve timing control device for an internal combustion engine as claimed in claim 10, wherein the electromagnetic brake comprises a friction material that is brought directly or indirectly into contact with the guide plate by energizing the electromagnetic brake.

18. (original) A method for changing a valve timing of an internal combustion engine employing a driving rotational member driven by a crankshaft of the engine, a driven rotational member including either one of a camshaft and a separate member integrally connected to and separable from the camshaft, and a phase-angle changing mechanism disposed between the driving rotational member and the driven rotational member for transmitting a torque of the driving rotational member to the driven rotational member and for varying a relative-rotation phase between the crankshaft and the camshaft depending on engine operating conditions, the method comprising:

converting a rotational movement produced by an electromagnetic force depending on the engine operating conditions into a radial displacement; and

further converting the radial displacement into a rotational movement of the camshaft to produce relative rotation between the driving rotational member and the driven rotational member.

19. (currently amended) A valve timing control device for an internal combustion engine comprising:

a driving rotational member driven by a crankshaft of the engine;

a driven rotational member including either one of a camshaft having a cam that opens an engine valve, provided at an associated one of an intake port and an exhaust port for opening and closing the associated port against a spring bias of a valve spring, which biases the engine valve in a direction for closing of the associated port, and a separate member integrally connected to and separable from the camshaft; and

an installation-angle adjusting device disposed between the driving rotational member and the driven rotational member to transmit a torque of the driving rotational member to the driven rotational member,

the installation-angle adjusting device comprising a guide and a movable operating member, the guide being provided at either one of the driving rotational member and the driven rotational member for guiding the movable operating member, and the movable operating member varying, depending on engine operating conditions, a relative-rotation phase between the crankshaft and the camshaft by way of movement of the movable operating member in a direction along the guide, said movement of the movable operating member being created by motion-converting a rotational movement produced by an electromagnetic force ~~depending on engine operating conditions~~.

20. (canceled)

21. (new) A valve timing control device for an internal combustion engine as claimed in claim 9, wherein the installation-angle adjusting device comprises a radial guide provided at either one of the driving rotational member and the driven rotational member for guiding the movable operating member and extending in a radial direction of the one rotational member, and the guide of the guide plate has a spiral guide groove that guides the movable operating member and is formed spirally from the outer periphery of the guide plate to the axis of the guide plate and produces the relative rotation of the guide to the radial guide by the electromagnetic force.